



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,316	09/26/2001	Tod S. Heiles	10019633-1	9922

7590 11/15/2004  
HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER

STEWART JR, CHARLES W

ART UNIT PAPER NUMBER

2853

DATE MAILED: 11/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/964,316

Applicant(s)

HEILES ET AL.

Examiner

Charles W. Stewart, Jr.

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-45 and 48-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26-41, 44, 45 and 48-52 is/are allowed.
- 6) ☒ Claim(s) 1-25, 42 and 43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

***DETAILED ACTION***

1. Claims 46-47 have been canceled.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-25 and 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshihiro (JP 080 852 42 A) in view of Walker et al. (US 6,158,344).

Yoshihiro discloses a printing device (54), comprising:

a pen (14, 15, 16, 17) configured to transfer an imaging medium onto a print media to form a printed diagnostic image (112).

a sensor configured to detect pen swath optical densities from the printed diagnostic image (26).

a print media line-feed advance offset configured to be calibrated corresponding to the pen swath height error compensation factor (page 3 of 13, lines 28-30).

wherein the sensor (26) is further configured to detect pen swath optical densities from multiple sets of print swath images that form the printed diagnostic image, each set of print swath images having a different detectable spacing increment (page 8 of 13, lines 8-18).

wherein the pen is further configured to form the printed diagnostic image with first swath images and second swath images, and wherein the sensor is further configured to

Art Unit: 2853

detect different pen swath optical densities from an overlap of the first swath images and corresponding second swath images (page 7 of 8, lines 18-29).

wherein the pen is further configured to form the printed diagnostic image with first swath images and second swath images, and wherein the sensor is further configured to detect different pen swath optical densities from an alignment of the first swath images with corresponding second swath images (page 8 of 13, lines 12-18).

wherein the application component is further configured to average the pen swath optical densities and the second pen swath optical densities to determine an averaged swath height error compensation factor (abstract).

However, Yoshihiro does not specifically disclose that an application component figured to determine a pen swath height error compensation factor from the pen swath optical densities.

Nevertheless, Walker et al. disclose that an application component figured to determine a pen swath height error compensation factor from the pen swath optical densities (col. 6, lines 30-37).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teaching of Walker et al. into the invention of Yoshihiro in order to prevent the degrading of a print image.

It is the Examiner's position that Walker disclose a pen that is further configured to form the printed diagnostic image with first swath images and second swath images, the second swath images printed after the first swath images and after a print media line-feed advance (col. 5, lines 48-52).

***Allowable Subject Matter***

4. Claims 26-41, 44-45 and 48-52 and are allowed.
5. The prior art fails to teach the limitation that offsetting a print media line-feed advance corresponding to the error compensation factor as set forth in claims 26-36. The prior art fails to teach the limitation detecting at least a second optical density correlating to a second offset between the first swath images and corresponding second swath images as set forth in claims 37-41. The prior art fails to teach the limitation printing which includes printing first swath images on the print media, advancing the print media, and printing second swath images on the print media, the first swath images and the second swath images forming the diagnostic image as set forth in claims 44-45 and 48-52

***Response to Arguments***

6. Applicant's argument filed May 14, 2004 have been fully considered but they are not deemed to be persuasive. Applicant argue that neither Yoshihiro nor Walker are directed to a pen configured to transfer an imaging medium onto a print media to form a printed diagnostic image; a sensor configured to detect pen swath optical densities from the printed diagnostic image; a print media line-feed advance offset configured to be calibrated corresponding to the pen swath height error compensation factor; wherein the sensor is further configured to detect pen swath optical densities from multiple sets of print swath images that form the printed diagnostic image, each set of print swath images having a different detectable spacing increment a sensor configured to detect pen swath optical densities from the printed diagnostic image; a print media line-feed advance offset configured to be calibrated corresponding to the pen swath height error compensation factor as stated above. Hence, there is no clear evidence that a pen swath height error

Art Unit: 2853

compensation factor is determined from pen swath optical densities. Accordingly, the modified Yoshihiro clearly teaches and suggests the applicant's claimed invention; and thus all of the above arguments.


7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing data of this final action.

*Contact Information*

8. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Examiner Charles Stewart, Jr. whose telephone number is (571) 272-2154.

Charles Stewart, Jr. 

November 13, 2004

  
Stephen D. Meier  
Primary Examiner